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**CARDIAC STIMULATION METHOD AND ASSOCIATED SYSTEM  
USING A STIMULATION HISTOGRAM AS AN  
INTEGRITY DIAGNOSTIC TOOL TO MONITOR THE  
PERFORMANCE OF AUTOMATIC CAPTURE VERIFICATION**

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**ABSTRACT OF THE INVENTION**

An implantable cardiac stimulation device and method provide a  
10 histogram for storing the number of primary and backup stimulation  
pulses delivered at each amplitude setting, to monitor the performance of  
the automatic capture verification. The stimulation device delivers cardiac  
stimulation therapy in which a stimulation histogram advantageously  
stores the number of primary pulses delivered at each stimulation output,  
15 or range of outputs, and separately stores the number of high-energy  
backup stimulation pulses delivered. Knowing the historical frequency of  
the applied stimulation amplitudes is useful to a physician in selecting  
future stimulation pulse output settings and the working margin. This  
information is also useful in determining the expected remaining battery  
20 life. The stimulation histogram further provides a useful diagnostic tool for  
evaluating the integrity of the stimulation device, lead system and  
performance of the automatic capture algorithm.